

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

New Jersey Draft Global Warming Response Act Recommendation Report January 16, 2009 Stakeholder Meeting – Green Buildings Summary of discussion and written comments

FOCUS QUESTIONS

1. What are the current incentives/disincentives to green buildings today, both in New Jersey and elsewhere?
2. What specific incentives are lacking in New Jersey to promote green building design?
3. What is the right balance of mandatory requirements and incentives (financial and otherwise) to generate green building in New Jersey?
4. Is making green buildings a mandatory standard cost prohibitive for affordable housing in New Jersey?

SUMMARY OF DISCUSSION AND WRITTEN COMMENTS

Incentives to green buildings

Potential incentives

- Incentives for innovative design (Wisconsin, European Union, passive and carbon neutral homes in Germany) and rapid deployment of innovations
- Incentives for clean energy generation (Minnesota, Wisconsin)
- Designated on-street parking, parking lot spaces for plug-in cars (Philadelphia).
- Fast-track and one-stop permitting — these are significant incentives; they can reduce a builder's costs and tip the business case. Some states have a central group of officials ("case managers") who help companies navigate the entire permitting process across the different departments. (Pennsylvania, Massachusetts)
- Simplify paperwork – provide a single form showing every incentive that a builder/buyer is qualified for.
- Incentives for pilots projects and demonstration projects
- Provide lower utility rates for green buildings.
- Examine tax policies from other countries
- Provide homeowner rebates for energy efficient homes only, rather than for everyone.
- Density bonuses. (The Cranford density bonus eliminated the first-cost disincentive.)

- Mandate disclosure of utility bills during home listing/sale process. This will create an incentive for prospective sellers to increase the energy efficiency of the property.
- Incentives to mitigate first costs of rehabs/upgrades to existing buildings.
- Classify energy efficiency and renewable energy facilities as an “inherently beneficial use” to limit zoning restriction against siting such technologies. (legislation is pending).
- Tax policies should encourage new green home construction as well as green rehabbing of existing homes.
- Create "renewable energy community" programs, where a lender - (it could be a state or a municipality) -- offers homeowners or businesses within certain neighborhoods low-interest loans to complete efficiency or renewable energy projects. Through an addition to their utility or property tax bills, borrowers in turn repay the loans over 20 or 30 years - typically with the money earned through energy savings or sales back to the grid. The debt typically stays with the property, rather than the individual, so homeowners who reckon they'd be selling their homes inside of a 30-year repayment period aren't dissuaded from participating.

Approaches to incentives

- Use a graduated incentive approach. All-at-once is cost prohibitive.
- Look at general principles, rather than specific incentives. Example – how do you tip the business case from unfavorable to favorable?
- Develop a green code as an additional code. Provide incentives for using the green code.
- Provide incentives only in growth areas.
- Provide incentives to developers.
 - Developers, not buyers, make the design decisions. Buyers may be willing to pay more for green options (energy efficient windows, furnaces, appliances) if they have the option to do so.
 - Developers absorb the cost for green upgrades, but residents get the benefit. Incentives for developers are necessary if they are to invest in green building practices without passing on the cost to buyers.
 - BPU's SmartStart Buildings rebates are received by building owner (the person whose name is on the utility bill), not by those actually paying the utility charges (i.e., building owners vs. renters).
- Extend incentives be extended to state buildings also. Example: Waive DCA permit review fees for buildings that meet the silver or higher LEED standard; establish a grant program to pay for installing equipment associated with green buildings in state buildings.
- Because the greenest building is the one already standing, the *Report* should include incentives for adaptive reuse and rehabilitation of existing buildings as well as deconstruction and recycling of building materials, particularly for redevelopment.

- Re: green residential buildings: greater consideration should go to multi-unit dwellings and residences with a smaller footprint per occupant, so that we are not simply fostering construction of greener McMansions.
- Incentivize the specific energy saving measures (i.e. design standards, technologies, systems) that can be implemented with little additional upfront cost, of that prove a quick payback (i.e. one to three years).
- More precisely link individual policies to the specific barriers which constrain the deployment of energy efficiency in the buildings sector

How to incentivize measures with high first cost and slow payback

- Amortize green costs over time to mitigate initial costs for first time home buyer. A first-buyer will live in a home for 7 years on average, which makes them unwilling to accept higher up-front costs.
- Long-term incentives will encourage investment that result in long-term cost reductions.
- Yearly inspection to certify “greenness” and tax incentives that are contingent on yearly certification will result in ongoing incentives to homeowner.
- Use a graduated incentive approach
- Target incentives to those specific market targets which face the most significant financial or practical barriers, such as the low-income, residential energy retrofit market

Disincentives to green buildings

- The current New Jersey property tax structure creates a disincentive for green upgrades to existing buildings, e.g., solar panels increase the value of property, which leads to higher taxes.
- There is a disconnect between leasers and owners. The person on the meter is not necessarily the person paying the bills.
- First costs are 2-9% of hard costs for a 2000 square foot green home. Building to a green standard adds 2-9% to the hard cost for a 2,000 square foot home for energy efficiency, and up to 16% higher if incorporating renewable fuels.
- Municipalities control zoning processes; some municipalities are opposed to increased density. Density bonuses work only if municipalities are willing to accept increased density.

Mandatory standards

Support for mandates.

- Incentive-only approach won’t allow us to achieve the aggressive greenhouse gas limits in the climate plan.
- New Jersey can’t afford to spend money on tax incentives.
- Setting standards can increase competition by eliminating low-ball bids based on low standards.

Opposition to mandates.

- Mandates can stifle innovation.
- Mandatory standards are bad because the green building industry is in its infancy. It is a “moving target” for residential sector.
- Mandates have a negative impact on carbon markets. Encourage market-based methods (e.g. voluntary offset market). Allow market demand to drive adoption of green building practices.
- See “Municipal Standards” below.

Approaches to mandates

- Increase standards over time. Go after the low-hanging fruit first.
- “Low-hanging fruit” for mandates: See the provisions at www.greenbuildingtoolkit.com. These are LEED “commonsense, instant payback” provisions.
- The Plan only addresses mandates for new construction. To reach our greenhouse gas goals, we must address existing buildings as well.
- Distinguish between new construction and existing structures. The green add-on is much higher for existing buildings.

Balance of incentives, mandates

- Standards should be voluntary first, then mandatory later.
- Use standards for new construction and incentives for existing buildings.
- Why should mix of mandates and incentives be different in the building sector than in other sectors? Example: waste-hauling mandates. Create mandates only at tolerable maximum costs or when return on investment is quick. Use incentives for everything else.
- Market-based solutions work. Example: builders who built Energy Star houses for fear of being sued for selling homes that were too expensive to heat.

Specific standards and codes

- LEED Standard - some LEED new construction costs less than non-green buildings. Example: LEED-certified PNC bank branches cost \$100,000 less to build than branches using traditional construction methods.
- There are other national standards that New Jersey can leverage: National Green Building Standard (will be ANSI-recognized), Green Building Code (California) Green Globe, International Code Council.
- Turning over green building to a LEED, Green Globes or other third party group will become its own bureaucracy and add cost. Standards such as these should be a guide, not a mandate.
- See Building Materials below for discussion of opposition to FSC-only certification for acceptance of lumber products under LEED.

- As currently written in the NJDEP's draft report, the proposed green building tax credit and "Clean and Green" policy for new construction would establish requirements that only name the U.S. Green Building Council's (USGBC) LEED rating tool. Other green building standards (as Green Globes, and others)), that could also move the state towards its sustainable building goals. The USGBC is a private organization and, as written, this policy will essentially give LEED a state-sponsored monopoly in the green building marketplace. Even if the language 'or comparable standard' is included, LEED will still become the de facto tool for the state because it is the only one specifically named.
- The proposed green building tax credit as written is inconsistent with previous green building laws enacted in New Jersey. The 3/07 S. 843 defined High Performance Buildings as buildings that have achieved either a Two Globes rating under the Green Globes tool, a Silver LEED rating, or other comparable programs. At that time, the Legislature recognized that the green building marketplace has expanded and multiple options for green building are necessary. The Green Building Initiative (GBI, which has adopted the Green Globes standard) asks that you stay consistent with existing law and add Green Globes, by name, to the policy before adoption. Green Globes have been officially recognized by legislation, regulation or executive order in eighteen states and by two Federal agencies (U.S. Dept. of Health and Human Services, Dept of Interior; has a formal partnership with the EPA, (and utilizes the EPA's Energy Star Target Finder energy modeling program); three insurance companies offer a 5% discount for buildings that achieve a Green Globes rating; the Council of State Government's Energy Efficiency resolution that recognizes both Green Globes and LEED; and is ANSI-accredited.

Municipal standards

- 566 local standards is tantamount to no standard.
- Local standards lead to uncertainty in the marketplace.
- National standards are being developed. Don't reinvent the wheel with local standards
- Lack of expertise on local planning boards is problematic and can lead to artificial barriers to construction. Example: chain of custody for lumber.
- Rather than empower 566 municipalities to each have their own green building standards, the State should provide a set of optional but uniform regulations that municipalities can adopt if they wish to be green. For instance, LEED Silver buildings would qualify for a 15% density bonus, LEED Gold 18%, etc. If a uniform approach is applied, based upon a National Rating system, the fears of the developers can be alleviated.

Enforcement

- Enforce code measures that are currently not being enforced. Example: VOCs, formaldehyde, compliance with some national air standards.
- Code changes are always accompanied by training of code officials. There is a mandatory continuing education requirement for code officials of 1.5 CEUs per three-year license cycle. Energy code training is NOT a mandatory training.

Pilots, demonstration projects, data

- Adopt the Chicago model – No policy adoption without testing. Chicago tests every measure with pilot projects before mandating or incentivizing anything. “No mandates for anything that isn’t tested. No incentives for anything that doesn’t work.”
- Some stakeholders held that we need data on true life cycle costs in order to evaluate cost/benefit ratio; others held that we have enough data to move forward.
- Must set baseline standards for collecting data so one can compare apples with apples.
- Agencies shouldn’t have to shoulder the burden of data alone. Example: Meadowlands Center. Consider instituting pilot studies and track them there?
- Look for recently-constructed commercial and residential buildings. Conduct pilot studies at these buildings
- Owners may not be willing to share operating cost data. According to BPU, utilities can collect data on energy performance under CEP.

Building materials

- “Green” means materials as well as. Provide incentives (including streamlined permitting) for the manufacture of green materials.
- All products should have financial payback. It is unreasonable to demand the use of products with no payback.
- Conduct life cycle analysis of building materials.
- Create financial incentives for utilities for the procurement of carbon-sequestering products.
- Wood is the most ecologically responsible choice for sustainable construction...and is, in fact, carbon negative on a total life cycle assessment basis. Carbon remains sequestered in finished wood products. Wood requires less energy to extract, process, transport, construct, and maintain than other building products. Wood is a better insulator than other materials – 15 times better than concrete and 400 times better than steel.
- An exclusive certification body for lumber is inefficient, inflationary, and completely without need. FSC-only certification for acceptance under LEED is would be costly, inefficient, and unnecessary. Readily available lumber products may be certified under several programs: Sustainable Forestry Initiative (SFI), Program for the Endorsement of Forest Certification ((PEFC), and a 6/08 amendment to the Lacey Act. In adopting its statewide Green Building Code in July, 2008, California dropped language from the final draft that would have

required the use of certified sustainably-produced lumber given the level of forestry management already incorporated into readily available lumber products today.

- “Chain of custody” for lumber is unnecessary: grade stamps and industry standards have been in place for 50 years . Lumber producers police themselves and NJ’s own Weights and Measures has been active in this field for at least 35 years. Segregating one pile of grade stamped lumber from another with a chain of custody but identical in all other respects is simply impractical, unenforceable and an added cost.
- Materials and resources – LEED projects routinely demonstrate the ability to divert 80% or more of construction debris from landfills, and also achieve very high recycling rates from building occupants, and do so at a profit. The DEP could follow the programs established in the LEED rating system to save tremendous amounts of waste, and will stimulate the economy at the same time.

Impacts on affordable housing

- Different considerations apply to publicly-funded and privately-funded affordable housing. Mandating high performance for the former requires larger taxpayer subsidies. The latter could be achieved via density bonuses, preferential utility rates, lower permit fees, shorter processing times, property tax breaks, etc.
- High standards are needed for affordable housing in order to ensure that homeowners can afford to pay their mortgages. If an “affordable home” lacks energy efficiency features, high utility rates and high energy costs may result in mortgage defaults.

Water Efficiency

- A water conservation audit could be conducted whenever an energy efficiency audit is conducted.
- Eliminating the sales tax from qualified high-efficiency fixtures, and incentivizing individuals and companies to reduce their water use will reap huge savings if we can avoid major infrastructure upgrades. This should be seriously considered when the State water supply map is completed.

Indoor Environmental Quality

- The current code for ventilation (ASHRAE 62-2004) sets minimum requirements to prevent most people just from getting sick. The DCA should require review of ventilation rates for commercial-industrial projects as part of the building permit process. DEP, DCA, and the Dept. of Health should establish rules for compliance with the existing codes for indoor air quality, particularly in our schools.

Geothermal Systems

- Geothermal systems are generally recognized as very efficient, but we see a very small percentage of projects in New Jersey installing them. Part of the problem is not having good access to the rules, regulations and geological data. We have one of the greatest projects in the world installed at Stockton College, but most industry practitioners do not have access to information about our aquifers for open-loop systems, or well-drill logs for evaluating closed-loop systems. This seems like something that the DEP could pretty easily make available.
- Acknowledge that any transfer of the heating load (from ground-source heat pumps, for example) will affect the electric power sector's "CO2 budget". As such, electric power generators should not be penalized for enabling emissions reductions in the residential, commercial or industrial space heating sub-sectors.

Education

- Identify sectors, then develop sector-specific education programs and support.
- Realtors. Target and educate realtors. Market perceptions are key; realtors play an important role in shaping market perceptions. Green buildings are worth more to realtors down the line.
- Appraisers. Problem – appraisers look only at comparables, not actual buildings. Comparables typically don't flag energy efficiency as a component of value.
- Banks. Problem – banks have latitude to accept or reject appraisals. Banks must be educated in order to accurately evaluate appraisals on green buildings. Banks don't understand value of green buildings and thus don't/relevant to finance accordingly. Banks must be educated to understand that energy efficiency reduces the risk of mortgage default by reducing the cost of utilities. Green mortgages reduce risk to banks because the homeowner can pay utility bills.
- Vocational schools. Need green curriculum development, especially in trade schools. When there is a standard you must train to the standard.
- Teachers. There aren't enough vocational school teachers.
- Commercial/industrial sector. Provide technical assistance for the commercial/industrial sector.
- Occupants. The weakest link is the occupant. Provide user-friendly in-home displays ("smart meters") to allow occupants to visualize energy consumption, waste, and phantom energy. Such feedback changes behavior
- Public. Need more public education on the meaning of "green" vis-à-vis buildings, energy in order to mitigate misunderstandings and misinformation about green building standards.
- Efficiency gains from new technology are often cancelled out by additional usage, larger structures ("rebound effect"). Eco-efficient does not equal eco-effective.

Other comments

- Explicitly recognize the role that utilities will play in helping the State achieve GHG emissions reductions in the building sector. Note that encouraging utility

investment in energy efficiency will require regulatory certainty and cost recovery for utilities consistent with traditional utility investments

- Be more aggressive in pushing for deployment of smart grid and advanced metering infrastructure (AMI) technologies.(aka “smart grid”). Support research, development, and demonstration of these technologies. Prove regulatory support for these investments.
- Provide clarification regarding Table 4.1 “2050 Energy Estimates”. Please provide detail with regard to the assumptions used to estimate “partial heating support” which assumes “25% electrification of the heating sector”.